Evaluation and Certification of Revised SRD

This revision involves the modification of a standard previously identified in the approved SRD, specifically ISMP section 3.3.3, which is cited as an implementing standard to SRD Vol. II Safety Criterion 9.0-4. This change will allow BNFL Inc. to proceed with implementation of certain changes during the design and construction phases at its own risk pending completion of safety documentation (i.e., safety evaluation and Authorization Basis Change Notice and , when Regulatory Unit approval is required, Authorization Basis Amendment Request).

An evaluation that demonstrates that the SRD will continue to identify a set of standards that will provide adequate safety, comply with all applicable laws and regulations, and conform to top-level safety standards is required. This determination must be certified.

Evaluation

Safety Criterion: 9.0-4 states:

> "Material that is part of the authorization basis shall be established, documented, and submitted to the Director of the Regulatory Unit for evaluation and in support of decisions and regulatory oversight. The material shall be maintained current with respect to changes made to the facility design and administrative controls and in the light of significantly new safety information."

ISMP section 3.3.3, "Changes to Safety Documentation," is cited as an implementing standard to this Safety Criterion.

Adequate Safety

ISMP section 3.3.3 describes the process of determining whether a change requires prior approval by the Regulatory Unit (RU) and the process for requesting RU approval of those changes that do require approval. BNFL Inc.'s proposal to proceed at risk with certain changes that require Regulatory Unit approval applies only to the design and construction phases (prior to Cold Testing). Thus, such changes would only be permitted prior to the introduction of hazardous or radioactive material to the RPP-WTP.

BNFL's proposed approach for implementation of changes, at its own risk, to the design or administrative controls prior to revision of the AB is as follows:

BNFL Inc. may make such changes if a review of the Authorization Basis is performed prior to implementation of the change and either:

a) The review demonstrates that a proposed change is consistent with the existing Authorization Basis or

b) The Authorization Basis is revised prior to the implementation of the proposed change.

The review that demonstrates that a proposed change is consistent with the existing Authorization Basis (AB) will be conducted as follows:

1. For design changes , a Design Input Memorandum (DIM) will be prepared. Signature on the DIM by the cognizant engineer indicates that the proposed design change was evaluated against the existing AB (through review of the Design Criteria Database, which includes the design-related portions of the AB).

2. For changes to administrative controls (procedure, program, plan or management process), the proposed change will be reviewed against the existing AB by individuals designated as experts on each of the documents comprising the Authorization Basis. This review will be documented on a Design Review Request form.

In accordance with footnote 10 to RL/REG-97-13, Rev. 5,[1] BNFL Inc. will develop a list of the types of primary design documents that must be reviewed for AB consistency. Similarly, BNFL Inc. will develop a list of those administrative control documents that, if changed, could impact the AB and, therefore, must be reviewed against the AB prior to change approval. Only new administrative control documents or changes to listed administrative control documents will undergo AB consistency review.

In either case, if the change is not consistent with the AB, an Authorization Basis Change Notice (ABCN) shall be issued.

This revision to the Authorization Basis allows BNFL Inc., during the design and construction phases (prior to Cold Testing of the facility), to implement such changes prior to revision of the Authorization Basis, as discussed below, provided that:

a) BNFL Inc. has performed an assessment demonstrating that the change provides adequate safety, as follows:

   - The Safety Implementation Group (Environmental, Safety and Health Department) reviews the signed DIM to determine whether the change conforms with the existing Hazard Analysis Report (HAR). This review will be documented on a Design Review Request form.

b) BNFL Inc. has informed the Regulatory Official (or his designee) of the change, if Regulatory Unit approval is required.

c) BNFL Inc. has assessed the change against the following guidelines[2] to determine if it is appropriate to implement the change at risk:

   Proceed at risk will <u>not</u> be used for changes that meet any of the following:

   1. Design changes that would not meet SRD Safety Criteria or top-level safety standards
   2. Changes to Implementing Standards that would have broad design implications
   3. Design changes that would result in significant dose increases to workers or the public
   4. Design changes that would result in introduction of significant new hazards.

   Proceed at risk may be used for changes that meet the following:

   1. Changes whose delay pending AB revision would result in significant cost or schedule impact, and
   2. Design changes that are physically reversible at an acceptable cost, as determined by the appropriate Design Manager and Area Project Manager, and any of the following:

[1] Footnote 10 to RL/REG-97-13 states, in part: "This position should not be used to preclude the contractor from establishing a class of SSCs and/or administrative features for which changes do not have the possibility of affecting the Authorization Basis and, therefore, would not require such an evaluation."

[2] The AB Maintenance Proposal accompanying this ABAR provides examples illustrating potential application of these decision criteria.

a) Changes involving interpretations to or tailoring of Implementing Standards that would have limited design implications and are judged to have no significant safety impact

b) Design changes that may increase the consequences of a previously-evaluated design basis event (DBE), but not significantly (i.e., the consequences are judged to be well below the applicable exposure standards)

c) Design changes that could result in a new DBE, but the consequences are judged to be well below the applicable exposure standards

d) Changes where prior Regulatory Unit approval is not required.

Concurrent with approval of an "at-risk" change, BNFL Inc. will issue a Deficiency Report (DR) against the change. The DR will be used to track closeout of ABCNs and to focus management attention on the need to complete timely revision of the AB, thus ensuring that the duration for which the change lacks formal approval will be minimized. The DR will also be used for trending purposes, thus ensuring that potential programmatic issues are identified and resolved, as described in ISMP section 3.16.8.

For those changes impacting the authorization basis and requiring approval of the Regulatory Unit that are to be implemented prior to approval by the Regulatory Official, the Contractor will expedite preparation of a request to amend the authorization basis and will request expedited review of the AB amendment request by the Regulatory Unit.

In the event that the Regulatory Official disapproves the request to amend the AB, a Non-Conformance Report (NCR) or Corrective Action Report (CAR) shall be issued, as described in the Quality Assurance Program. The NCR or CAR will ensure prompt identification and implementation of any needed corrective actions, including potential rework.

In deciding to proceed with such changes, BNFL Inc. assumes the financial risk (i.e., the cost of rework or any other adverse condition arising from the interim implementation).[3]

BNFL Inc.'s Authorization Basis Maintenance program, described in this ABAR, also will eliminate or minimize the following types of risk, as discussed further below.

a) Regulatory risk (i.e., the potential for Regulatory Unit inspection and enforcement resources to be misdirected due to temporary non-alignment with the AB)

b) Safety risk (i.e., the physical risk from nuclear, radiological or process chemical hazards)

c) Programmatic risk (i.e., the potential for failure to meet schedule milestones in the Tri-Party Agreement or the Contract).

With respect to regulatory risk, as noted above, the DR that will be issued against an "at risk" change will be used to track closeout of pending revisions of the AB, thus ensuring that the duration for which the change is at risk will be minimized. The DR will also be used for trending purposes, thus ensuring that potential programmatic failures are identified and resolved. In addition, BNFL Inc. proposes that the duration of a proceed-at-risk condition be minimized by expediting preparation of Authorization Basis changes. BNFL Inc. will target completion of the

[3] BNFL Inc. will resolve any contractual issues related to BNFL Inc.'s assumption of financial risk for such changes with the DOE Office of River Protection; hence, the scope of BNFL Inc.'s assumption of financial risk, as it relates to the TWRS Privatization Contract No. DE-AC06-96RL13308 – Mod. No. A006 is not addressed in this ABAR.

AB change documents[4] within 14 days of its decision to proceed at risk. Failure to meet the 14-day target for issuance of AB change documents will be highlighted in the tracking system to ensure that increased management attention is obtained. Similarly, BNFL Inc. proposes that, when Regulatory Unit approval of the change is required, the RU will perform an expedited review that targets completion within 14 days of submittal of ABARs that describe changes being implemented at risk.

NCRs or CARs that will be issued if the Regulatory Official disapproves the request to amend the AB will ensure prompt identification and implementation of any needed corrective actions, including potential rework. RU inspectors will be able to review open DRs and NCRs, such that they will be knowledgeable of any temporary misalignments between the as-designed, as-built facility and the AB.

For those cases where the above target dates are not met, BNFL Inc. will expedite its actions for the open DRs, NCRs and CARs to reach closure no more than 3 months after BNFL management decides to proceed at risk with a change. Furthermore, BNFL Inc. proposes to close any remaining open DRs, NCRs and CARs related to "at-risk" changes prior to initiation of Cold Testing; therefore, the AB will be fully aligned with the as-designed, as-built facility well in advance of production operations. Thus, the Regulatory Unit will be fully apprised of all changes that impact the AB prior to issuance of the Production Operations Authorization.

Therefore, since (1) AB revisions will be expedited and tracked by DRs, (2) increased management attention will be applied to pending AB revisions that do not meet the target schedule, (3) DRs and potential NCRs or CARs related to "at-risk" changes will be accessible by RU inspectors so that the current status of the AB can be ascertained, and (4) all open actions related to such changes will be closed out prior to Cold Testing, "regulatory risk" is eliminated.

The physical risk of an accident involving radiological, nuclear or process chemical hazards occurring during design or construction (prior to initiation of Cold Testing) is low.[5] Because BNFL Inc.'s proposed AB maintenance program will require that all open actions related to changes that will proceed at risk be closed prior to Cold Startup, "safety risk" will be very low.

"Programmatic risk" is not a concern under this proposal for the following reasons. First, as described above, only those changes that satisfy the stated criteria will be approved by BNFL Inc. management to be implemented on an at-risk basis. Second, the management controls described above to minimize the duration of a proceed-at-risk condition will likewise minimize the possibility of schedule delays. Most importantly, allowing certain changes to be implemented pending AB revision will actually prevent project schedule delays resulting from the need to hold up work until safety documentation is prepared, reviewed internally, submitted to the RU, and reviewed and approved by the RU.

Given that the risk of an accident involving radiological, nuclear or process chemical hazards occurring during design or construction (prior to initiation of Cold Testing) is low, this change maintains adequate safety.

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[4] Authorization Basis Change Notice (ABCN), Safety Evaluation, and, if RU approval is required, Authorization Basis Amendment Request (ABAR)

[5] During construction prior to Cold Testing, there is a potential of encountering existing site hazards, such as contaminated soil.

Compliance with All Applicable Laws and Regulations

There are no applicable laws or regulations governing maintenance of the Authorization Basis during design and construction.

Conformance to Top-Level Safety Standards

Overall principle 4.1.3, "Authorization Basis," of DOE/RL-96-0006[6], Rev. 1, *Top-Level Radiological, Nuclear and Process Safety Standards and Principles for TWRS Privatization Contractors*, U.S. Department of Energy, Richland Operations Office, July 1998, states:

> "Material that is part of the authorization basis should be established, documented, and submitted to the Director of the Regulatory Unit for evaluation and in support of decisions and regulatory oversight. The Contractor should maintain the material current with respect to changes made to the facility design and administrative controls and in the light of significantly new safety information."

Adoption of this revision will maintain conformance to top-level principle 4.1.3. BNFL Inc.'s proposed AB Maintenance program for changes that will be approved to proceed "at risk" pending revision of the AB includes management controls (i.e., DRs and NCRs or CARs) to ensure that the AB revision is captured and tracked to completion.

General process safety principle 5.2.9, "Management of Change," states:

> "The Contractor should evaluate all planned changes involving the technology of the process and the facility design and operation in order to ensure that the impact on safety is analyzed and acceptable and to determine the need for modifications to operating procedures. The Contractor should establish and implement written procedures to manage changes to process chemicals, technology, equipment, and procedures; and changes to facilities. These procedures should address the technical basis for the proposed changes, impact of the changes on process safety, modification of the operating procedures, the schedule for proposed changes, and authorization for proposed changes."

BNFL Inc.'s proposed implementation of changes "at risk" conform to this principle, because nothing in this proposal alters the processes of evaluating planned changes; only the timing of such evaluations and their authorization (when required) is proposed to be allowed to be deferred temporarily in certain instances.

[6] DOE/RL-96 -0006, Rev. 1, *Top-Level Radiological, Nuclear and Process Safety Standards and Principles for TWRS Privatization Contractors*, U.S. Department of Energy, Richland Operations Office, July 1998

Certification

The SRD continues to identify a recommended set of standards that, when properly implemented, will provide adequate safety, comply with all applicable laws and regulations, and conform to top-level safety standards.

Certification that the SRD identifies a set of standards that continues to provide adequate safety, complies with all applicable laws and regulations, and conforms to top-level safety standards is based on adherence to the DOE/RL-96-0004 standards identification process and successful completion of review and confirmation by the PSC.

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RPP-WTP Manager of Operations /Designee Date